

REMARKS

Reconsideration of the above-identified application in view of the foregoing amendments and following remarks is respectfully requested.

The office action rejected claims 1, 3-9, 12 and 14-16 under § 103(a) as allegedly being unpatentable over U.S. Patent Application Publication 2002/0025265 to Ikeda (“Ikeda”) in view of U.S. Patent No. 5,360,322 to Henein et al (“Henein”) and U.S. Patent No. 6,027,239 to Ghassaei (“Ghassaei”). [12/17/2007 Office Action at p. 2]. The office action also rejected claims 10-11 and 17-18 under § 103(a) as allegedly being obvious over Ikeda in view of Henein and Ghassaei as applied to claims 1, 3-9, 12 and 14-16, in further view of U.S. Patent Application Publication 2004/0013544 to Kimura et al (“Kimura”). [12/17/2007 Office Action at p. 6].

The present application claims priority based on Japanese Patent Application No. 2003-040546 filed on February 19, 2003. By submitting the accompanying certified English translation of JP 2003-040546, the effective filing date of the present application becomes February 19, 2003. Consequently, Kimura, which was published on January 22, 2004 and filed on July 14, 2003, no longer qualifies as prior art under § 102(e), and the rejection of claims 10-11 and 17-18 under 35 U.S.C. 103(a) becomes moot. Thus, at least, claims 10-11 and 17-18 are patentable and in condition for allowance.

Claims 1, 4-12, and 14-18 were pending. By this paper, claims 1, 6, 11, 12, and 16 are amended and claims 4-5 and 14-15 are canceled without prejudice or disclaimer. Claims 1 and 12 are amended to recite the subject matter of now canceled claims 4-5 and 14-15, respectively. Claim 6 is amended to depend upon independent claim 1 instead of claim 5, claim 11 is amended to depend upon independent claim 1 instead of claim 4, and claim 16 is amended to depend upon independent claim 12 instead of claim 16. Support for these amendments may

be found throughout the application as originally filed. Accordingly, no new matter will be added to this application by entry of these amendments. Therefore, entry of the amendments is respectfully requested.

A. Claims 1, 3, 6-12, and 16-18 Are Patentably Distinct From Ikeda Alone Or In Combination With Henein And/or Ghassaei

The rejection of claim 1 is respectfully traversed. As explained more fully below, the requirements for such a rejection are not met. Specifically, Applicant's amended claim 1 recites:

“1. An electric compressor, comprising:
a compressor housing;
a gas compression mechanism accommodated in the compressor housing;
an electric motor that drives the compression mechanism;
a motor driving circuit that drives the electric motor; and
a circuit cover attached to an outer surface of the compressor housing, wherein the compressor housing and the circuit cover define an accommodating space, wherein the motor driving circuit is accommodated in the accommodating space, and wherein the motor driving circuit is attached to the circuit cover,
wherein a fastener for attaching the motor driving circuit to the circuit cover is attached to the cover, wherein the fastener prevents the motor driving circuit from being detached from the circuit cover, and permits the motor driving circuit to move toward the circuit cover,
wherein, when the circuit cover is joined to the compressor housing, the motor driving circuit is held between the compressor housing and the circuit cover,
wherein the motor driving circuit includes a circuit board and a switching element, wherein the circuit board has a first surface facing the circuit cover and a second surface located on a side

opposite from the circuit cover, and wherein the switching element is mounted on the second surface, and

wherein, when the circuit cover is joined to the compressor housing, the switching element is pressed against the compressor housing.”

According to claim 1, and as stated in the specification at page 12, lines 4-25, it is unnecessary to attach the switching elements (44A) directly to the compressor housing (11) by bolting or the like in order to allow the switching elements (44A) to more efficiently transfer heat. Thus, it is possible to reduce the manufacturing costs of the electric compressor (10) and to allow the switching elements (44A) to more efficiently transfer heat by tightly contacting the switching elements (44A) with the compressor housing (11).

Ikeda is directed to a motor-driven compressor formed integrally with a compressor device for compressing refrigerant and a motor for driving the compressor device. The Office Action admits that “Ikeda does not teach that the motor driving circuit (2-4) is attached to the circuit cover, nor ... a fastener for attaching the motor driving circuit to the circuit cover which permits the motor driving circuit to move toward the circuit cover and prevents the motor driving circuit from being detached from the circuit cover.” [12/17/07 Office Action at p. 2]. The Office Action also admits that the “combined references do not explicitly teach that the switching element is attached to the surface facing away from the circuit cover, or that it is pressed against the compressor housing when the circuit cover is joined to the housing.”

[12/17/07 Office Action at p. 4]. The Office Action then asserts that

“Ikeda teaches that ‘heat generated by inverter 2 of drive circuit 4 is absorbed by lower temperature refrigerant gas through partition wall 1b,’ (paragraph 18, lines 3-5), and conductive contact between the switching element (inverter) and the compressor housing would have increased the cooling effect on the switching element.

Therefore it would have been obvious at the time of the invention

to one of ordinary skill in the art to arrange the switching element on the circuit board such that it was attached to the face opposed from the circuit cover and was pressed against the compressor housing when the circuit cover was assembled to the housing.” [12/17/07 Office Action at p. 4].

Applicant respectfully disagrees. In Ikeda, electronic components (switching elements) of inverter (2) are merely mounted on a surface of a control circuit (3) facing toward a circuit cover, or a lid (6), and electronic components are buried within insulating resin material (100). [See Figs. 1 and 2]. In contrast to claim 1 of the present application, the insulating resin material (100) of Ikeda is not tightly pressing and creating contact of the inverter (2) with the partition wall (1b). Therefore, heat of electronic components of Ikeda is not transferred to the partition wall (1b) without bolting of the electronic components to the partition wall (1b).

Accordingly, in Ikeda, to obtain sufficient heat transfer effect, manufacturing costs of the electric compressor increase. Thus, Ikeda does not teach, disclose or suggest “wherein, when the circuit cover is joined to the compressor housing, the motor driving circuit is held between the compressor housing and the circuit cover, wherein the motor driving circuit includes a circuit board and a switching element, wherein the circuit board has a first surface facing the circuit cover and a second surface located on a side opposite from the circuit cover, and wherein the switching element is mounted on the second surface, and wherein, when the circuit cover is joined to the compressor housing, the switching element is pressed against the compressor housing” as recited in Applicant’s amended claim 1.

Henein is directed to a hydraulic pump driven by an electric motor. According to the Office Action, Henein teaches “that their control apparatus (3) is attached to the circuit cover, and that this creates a modular apparatus that is inexpensive to manufacture.” [12/17/07 Office Action at p. 2]. Without commenting on that assertion, Applicant notes that, in Henein, electrical

components are merely mounted on the motor driving circuit board (3), but do not contact the circuit cover (18). [See Fig. 1]. Additionally, in “the projection 38 [sic: 36] an electrical connection 38 is provided in order to connect the motor 2 to the control apparatus 3, respectively to the latter’s electric connection 38. The hydraulic section 4 and the control apparatus 3 are firmly retained in the projections 38[sic: 36], 37 by indentations, mortisings or flanging of the edges of the projections.” [Henein, col. 3, lns. 24-30]. Thus, the electric components of Henein are not pressed against the compressor housing (36). Accordingly, Henein does not teach, disclose or suggest “wherein, when the circuit cover is joined to the compressor housing, the motor driving circuit is held between the compressor housing and the circuit cover, wherein the motor driving circuit includes a circuit board and a switching element, wherein the circuit board has a first surface facing the circuit cover and a second surface located on a side opposite from the circuit cover, and wherein the switching element is mounted on the second surface, and wherein, when the circuit cover is joined to the compressor housing, the switching element is pressed against the compressor housing” as recited in Applicant’s amended claim 1.

Ghassaei is directed to a display and user interface incorporated into an on-board engine vibration monitoring and trim balance system. The Office Action asserts that

“Ghassaei teaches a structure for mounting a ‘personality module’ to an instrument package. In particular, Fig. 2 shows a circuit cover (50), a circuit board (24), and several fasteners (52) which prevent the circuit from being detached from the circuit cover. Further, as the presence of spacers (42) indicates, the fasteners permit the circuit board to move toward the circuit cover. Ghassaei teaches that the personality module is installed separately from the rest of the system (col. 3, ln. 50-51), which would lead one of ordinary skill in the art to the conclusion that the structure disclosed is useful in maintaining cohesion of a separately assembled structure. It would further have been obvious to provide fasteners to attach the motor driving circuit to the circuit cover in order to maintain cohesion of the circuit cover’s

separately assembled structure, as taught by Ghassaei.” [12/17/07 Office Action at p. 3].

Without commenting on that assertion, Applicant notes that the Office Action does not assert and Applicant cannot find that Ghassaei teaches, discloses or suggests “wherein, when the circuit cover is joined to the compressor housing, the motor driving circuit is held between the compressor housing and the circuit cover, wherein the motor driving circuit includes a circuit board and a switching element, wherein the circuit board has a first surface facing the circuit cover and a second surface located on a side opposite from the circuit cover, and wherein the switching element is mounted on the second surface, and wherein, when the circuit cover is joined to the compressor housing, the switching element is pressed against the compressor housing” as recited in Applicant’s amended claim 1.

Accordingly, amended claim 1 is respectfully asserted to be patentably distinct from the cited references (i.e., Ikeda, Henein, and Ghassaei), either taken alone or in combination. For at least similar reasons, its dependent claims 3 and 6-11 as well as independent claim 12, which is an assembly method corresponding to claim 1, and its dependent claims 16-18, are also believed to be in condition for allowance.

Applicant has chosen in the interest of expediting prosecution of this patent application to amend the pending claims as set forth above. These amendments should not be regarded in any way as admissions that the cited documents are, in fact, prior art. Likewise, Applicant has chosen not to swear behind documents cited by the office action or to otherwise submit evidence to traverse the rejection at this time. Applicant, however, reserves the right, as provided by 37 C.F.R. §§ 1.131 and 1.132, to do so in the future as appropriate. Finally, Applicant has not specifically addressed the rejections of the dependent claims 3, 6-11, and 16-

18. Applicant respectfully submits that the independent claims 1 and 12, from which they depend, are in condition for allowance as set forth above. Accordingly, the dependent claims 3, 6-11, and 16-18 also are in condition for allowance. Applicant, however, reserves the right to address such rejections of the dependent claims in the future as appropriate.

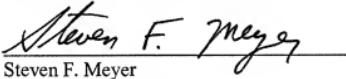
CONCLUSION

For the above-stated reasons, this application is respectfully asserted to be in condition for allowance. An early and favorable examination on the merits is requested. In the event that a telephone conference would facilitate the examination of this application in any way, the Examiner is invited to contact the undersigned at the number provided.

THE COMMISSIONER IS HEREBY AUTHORIZED TO CHARGE ANY ADDITIONAL FEES WHICH MAY BE REQUIRED FOR THE TIMELY CONSIDERATION OF THIS AMENDMENT UNDER 37 C.F.R. §§ 1.16 AND 1.17, OR CREDIT ANY OVERPAYMENT TO DEPOSIT ACCOUNT NO. 13-4500, ORDER NO. 5000-5147.

Respectfully submitted,
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